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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/699,468

10/31/2003

Karen J. Smiley

2775

23361 7590 01/29/2007  
ABB INC.  
LEGAL DEPARTMENT-4U6  
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EXAMINER

PARDO, THUY N

ART UNIT

PAPER NUMBER

2165

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

01/29/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/699,468

Applicant(s)

SMILEY ET AL.

Examiner

Thuy N. Pardo

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 09 January 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-8, 10-18, 38 and 40-44 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8, 10-18, 38 and 40-44 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Response to Amendment*

1. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

### *Double Patenting*

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned

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with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-8, 10-18, 38 and 40-44 are rejected on the ground of nonstatutory double patenting over claims 1-30 of U. S. Patent No. 7,107,186 since the claims, if allowed, would improperly extend the "right to exclude" already granted in the patent.

The subject matter claimed in the instant application is fully disclosed in the patent and is covered by the patent since the patent and the application are claiming common subject matter, as follows: a method for evaluating a transformer using data test result of a transformer, the test result being determined from a test taken during transformer manufacture.

Claims 1-8, 10-18, 38 and 40-44 are provisionally rejected on the ground of nonstatutory double patenting over claims 5-16 and 27-34 of copending Application No. 10,699,217. This is a provisional double patenting rejection since the conflicting claims have not yet been patented.

The subject matter claimed in the instant application is fully disclosed in the referenced copending application and would be covered by any patent granted on that copending application since the referenced copending application and the instant application are claiming common subject matter, as follows: a method for generating data test results from transformers.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-8, 10-18, 38 and 40-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Apfelbaum et al. (Hereinafter "Apfelbaum") WO 00/072145 and further in view of Geromel et al., (Hereinafter "Geromel") in "The Application of Intelligent Systems in Power Transformer Design", IEEE 2002.

As to claim 1, Apfelbaum teaches the invention substantially as claimed, comprising:

comparing the data representing test results to predetermined criteria for the test results to determine whether the test results satisfy the predetermined criteria [comparing the determined paths through the model and the requirement expressions, see the abstract; page 6, lines 14-25; page 12, lines 10-24];

counting the number of the test results that do not satisfy the predetermined criteria [page 11, lines 12-22]; and

generating an indication that the transformer design needs further analysis if at least a predetermined quantity of the test results do not satisfy the predetermined criteria [generating a report based on the evaluation whether the determined paths through the model satisfy the requirement expressions, see the abstract; page 12, lines 10-24].

Apfelbaum does not explicitly teach displaying the indication on a display device although it has the same functionality of analyzing whether the model (or a transformer design) satisfies the requirement expression and generating a report based on the evaluating. However, these processes are implemented in the computer system [see page 7, lines 21-29].

However, Apfelbaum does not explicitly teach applying a test evaluation to a transformer design. Geromel teaches using information available in the database of testing transformers [fig. 2, 4 of page 288 and 4.2 of page 289] and displaying the indication to the user [1.1-1.5 of pages 287-290].

It would have been obvious to one of ordinary skill in the arts at the time of the applicant's invention to add the feature of Geromel to the system of Apfelbaum as an essential means to measure how the design of the transformers affect the testing performance.

As to claims 19, 38 and 27, all limitations of these claims have been addressed in the analysis above, and these claims are rejected on that basis.

As to claim 2, Apfelbaum teaches the invention substantially as claimed. Apfelbaum further teaches storing the data representing test results in the database [page 20, lines 10-23; page 17, lines 1-27].

As to claim 3, Apfelbaum and Geromel teach the invention substantially as claimed. Apfelbaum further teaches storing the data representing test results in a plurality of tables in the

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database, each of the plurality of tables having the data representing test results for one particular type of test stored therein [page 17, lines 6-16].

As to claim 4, Apfelbaum and Geromel teach the invention substantially as claimed. Apfelbaum further teaches storing identifying data in the data base, the identifying data identifying at least one of a serial number, a design, and a design version of a particular one of the plurality of transformers from which a corresponding one of the data representing test results is obtained [page 17, lines 1-27; page 20, lines 10-23].

As to claim 5, Apfelbaum and Geromel teach the invention substantially as claimed. Apfelbaum further teaches that the predetermined criteria for the test results are stored in the database [inherent in the system, page 17, lines 17-27].

As to claim 6, Apfelbaum and Geromel teach the invention substantially as claimed. Apfelbaum further teaches at least one of a minimum, a maximum, a range, and a set of discrete values [page 18, lines 8 to col. 20, lines 7].

As to claim 7, Apfelbaum and Geromel teach the invention substantially as claimed. Apfelbaum further teaches the test results are results of acceptance testing [ab; 260-264 of fig. 13].

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As to claim 10, Apfelbaum and Geromel teach the invention substantially as claimed. Apfelbaum further teaches determining whether the data representing test results is at least one of: (i) greater than the minimum; (ii) less than the maximum; (iii) within the range; and (iv) substantially equal to at least one of the predetermined discrete values [targets totaled 75%, page 19, lines 26-29].

As to claim 11, Apfelbaum and Geromel teach the invention substantially as claimed. Geromel further teaches that the test results are the results of at least one of the following tests: load loss; no-load loss; impedance; transformation ratio; turn to turn faults; high potential; double induced; impulse; heat run; sound level; short circuit; and tank pressure [fig. 2-8 of pages 188-190].

As to claim 12, Apfelbaum and Geromel teach the invention substantially as claimed. Apfelbaum further teaches sending the indication to a computing device [col. 11, lines 12-22].

As to claim 13, Apfelbaum and Geromel teach the invention substantially as claimed. Apfelbaum further teaches defining the database [page 17, lines 17-24].

As to claim 14, Apfelbaum and Geromel teach the invention substantially as claimed. Apfelbaum further teaches selecting the type of the test results included in the database [page 7, lines 4-15; page 20, lines 2-7].



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As to claim 15, Apfelbaum and Geromel teach the invention substantially as claimed. Apfelbaum further teaches selecting the predetermined criteria [page 11, lines 12-13].

As to claim 16 Apfelbaum and Geromel teach the invention substantially as claimed. Apfelbaum further teaches the predetermined quantity of the test results is a predetermined numerical total [col. 11, lines 12-22].

As to claim 17, Apfelbaum and Geromel teach the invention substantially as claimed. Apfelbaum further teaches that the predetermined quantity of the test results is a predetermined percentage of the test results [page 15, lines 22 to page 16, lines 5; pages 18-19; 264 of fig. 13].

As to claim 18, Apfelbaum and Geromel teach the invention substantially as claimed. Apfelbaum further teaches selecting the predetermined criteria from the database based on at least one of one of the transformer design and a version of the transformer design [page 1, lines 19-25].

As to claims 8, 38 and 40-43, all limitations of these claims have been addressed in the analysis above, and these claims are rejected on that basis.

1. Claim 44 is rejected under 35 U.S.C. 103(a) as being unpatentable over Apfelbaum et al. (Hereinafter "Apfelbaum") WO 00/072145 A1 and Geromel et al., (Hereinafter "Geromel") in

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“The Application of Intelligent Systems in Power Transformer Design”, IEEE 2002, and further in view of Miyamoto US Patent No. 6,304,095.

As to claim 44, Apfelbaum and Geromel teach the invention substantially as claimed. Apfelbaum further teaches determining that the certain transformer design over-performs if the retrieved test results consistently exceed the retrieved criteria [page 18, lines 15-19]. However, Apfelbaum and Geromel do not explicitly teach modifying the certain design to reduce the cost of components required by the transformer design. Examiner notes that the feature “to reduce the cost of the components” is just a consequent result of the action “modifying the design”. The feature of modifying the design in order to get different benefits based on the user’s desires. Miyamoto teaches [see the abstract; fig. 5, 9; col. 5, lines 1-58].

It would have been obvious to one of ordinary skill in the Data Processing art at the time of the invention to add the feature of Miyamoto to the system of Apfelbaum-Geromel as an essential means to reduce time and cost [see Miyamoto, col. 5, lines 40-58].

### ***Response to Arguments***

2. Applicant's arguments with respect to claims 1-8, 10-18, 38 and 40-44 have been considered but are moot in view of the new ground(s) of rejection.

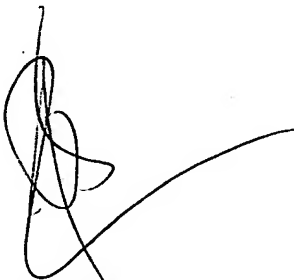
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3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thuy Pardo whose telephone number is 571-272-4082. The examiner can normally be reached on Mon-Thur.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Gaffin can be reached on 571-272-4146. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

January 23, 2006

A handwritten signature in black ink, appearing to be 'Thuy N. Pardo', with a long horizontal stroke extending to the right.

**THUY N. PARDO  
PRIMARY EXAMINER**